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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,148	06/24/2002	Kiyokazu Ikeda	SONYJP 3.3-796	9928

530 7590 09/30/2009

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EXAMINER	
TESLOVICH, TAMARA	
ART UNIT	PAPER NUMBER
2437	

MAIL DATE	DELIVERY MODE
09/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/088,148	IKEDA, KIYOKAZU	
	Examiner	Art Unit	
	Tamara Teslovich	2437	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *02 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5 and 9-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5 and 9-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Applicant's Remarks and Amendments filed June 2, 2009.

Claims 3-4 and 6-8 remain cancelled.

Claims 1-2, 5, 9 and 17 are amended.

Claims 1-2, 5, and 9-17 are pending and herein considered.

Response to Arguments

Applicant's amendments to the claims serve to overcome the Examiner's previously set forth 35 USC 112, 2nd paragraph, rejections of claims 1, 2, 5, and 9-17. Accordingly, those rejections are hereby withdrawn.

Applicant's arguments, filed June 2, 2009, with respect to the 35 U.S.C. 102(e) rejection(s) of claim(s) 1-2, 5, and 9-17 in view of United States Patent No. 6,856,820 B1 to Kolls have been fully considered but are moot in view of the new grounds of rejection presented below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 5 and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,856,820 B1 to Kolls and further in view of United States Patent No.5,375,059 to Kyrtsos et al.

Regarding **claim 1**, Kolls discloses a service providing system (col.3 line 45 thru col.4 line 20), including, at least, a plurality of electronic appliances, a service server (Internet based server), a communication network, and an authentication server being connected to the communication network; each electronic appliance (in-vehicle device) being equipped with a wireless communication terminal function, being mounted in a moving body, and being assigned a unique device ID, and the service server (Internet based server) having a function for providing a predetermined service and storing said unique device ID for each electronic appliance to which service can be provided, the service providing system comprising; authentication process means for allowing a communication terminal apparatus (global appliance/internet appliance) to access a respective electronic appliance (in-vehicle device) only when the communication terminal apparatus (global appliance/internet appliance) has been authenticated; registration means for registering said unique device ID assigned to said each electronic appliance and transmission means for using said unique device ID to provide access, via communication network, from the service server (Internet based server) to a specified electronic appliance to which a specified service needs to be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the specified electronic appliance, in which the communication

terminal apparatus and the service server can access the electronic appliance only through the authentication server (col.3 line 45 thru col.4 line 20; col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23), and in which said each electronic appliance includes (i) a receiving device to receive global positioning satellite (GPS) radio waves (col.2 lines 59-64; col.34 lines 20-35; col.43 line 59 thru col.44 line 10; col.46 lines 11-19), and (ii) an autonomous navigation unit having to obtain travel information of the respective moving body without the use of the GPS radio waves (col.1 lines 19-21 “engine performance data”; col.3 lines 54-56 "vehicle telemetry and metric data can include global positioning system (GPS) data, vehicle operational data, engine performance data, and other vehicle data"; col.6 lines 45-59 "parking proximity sensor" and "further interconnection to a vehicle's control system, engine control system or other vehicle operational point"; col.7 lines 22-64; col.32 lines 11-25 "vehicle monitoring and metering means").

Kolls fails to specifically teach wherein the autonomous navigation unit includes a gyro and a speed sensor and in which the travel information is indicative of a speed of the respective moving body and a direction in which the respective moving body is moving, and (iii) a position measuring unit to receive the GPS radio waves and the travel information and to determine a current position of the respective moving body such that the position measuring unit determines the current position of the respective moving body by use of the travel information when the GPS waves are not available.

Kyrtsos teaches a vehicle position determination system and method in which information from global positioning systems (GPS), pseudolites, and inertial reference

units (IRU) is combined and enhanced in order to provide extremely accurate position estimates of terrestrial vehicles (cols. 4-5). Kyrtsos' inertial reference units obtain specific-force measurements from accelerometers and gyroscopes ("direction and speed") which when integrated into a navigation mathematical equation produces a vehicle's ("moving body") real time ("current") position and velocity (col.4 lines 3-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Kolls the inertial reference unit as disclosed in Kyrtsos and well known in the art in order to provide Kolls' service providing system and navigation system with the enhanced ability to provide a user with extremely accurate position information whether or not global positioning system information is available.

Regarding **claim 2**, Kolls discloses a service providing system (col.3 line 45 thru col.4 line 20), including, at least, a plurality of electronic appliances, a service server (Internet based server), a communication network, and an authentication server being connected to the communication network; each electronic appliance (in-vehicle device) being equipped with a wireless communication terminal function, being mounted in a moving body , and being assigned a unique device ID, and the service server (Internet based server) having a function for providing a predetermined service and storing said unique device ID for each electronic appliance to which service can be provided, the service providing system comprising; authentication process means for allowing a communication terminal apparatus (global appliance/internet appliance) to access a respective electronic appliance (in-vehicle device) only when the communication

terminal apparatus (global appliance/internet appliance) has been authenticated; first transmission means for providing access, via said communication network, from one of said electronic appliances to said service server (Internet based server) and transmitting information which has a predetermined content that can be used by a specified service from said one of said electronic appliances to said service server (Internet based server); and second transmission means for using said unique device ID to provide access, via said communication network, from said service server (Internet based server) to a specified electronic appliance to which a specified service needs to be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the specified electronic appliance only through the authentication server (col.3 line 45 thru col.4 line 20); in which the communication terminal apparatus and the service server can access the electronic appliance only through the authentication server (col.3 line 45 thru col.4 line 20; col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23), and in which said each electronic appliance includes (i) a receiving device to receive global positioning satellite (GPS) radio waves (col.2 lines 59-64; col.34 lines 20-35; col.43 line 59 thru col.44 line 10; col.46 lines 11-19), and (ii) an autonomous navigation unit having to obtain travel information of the respective moving body without the use of the GPS radio waves (col.1 lines 19-21 “engine performance data”; col.3 lines 54-56 "vehicle telemetry and metric data can include global positioning system (GPS) data, vehicle operational data, engine performance data, and other vehicle data"; col.6 lines 45-59 "parking proximity sensor" and "further interconnection to a vehicle's control system, engine control system or

other vehicle operational point"; col.7 lines 22-64; col.32 lines 11-25 "vehicle monitoring and metering means").

Kolls fails to specifically teach wherein the autonomous navigation unit includes a gyro and a speed sensor and in which the travel information is indicative of a speed of the respective moving body and a direction in which the respective moving body is moving, and (iii) a position measuring unit to receive the GPS radio waves and the travel information and to determine a current position of the respective moving body such that the position measuring unit determines the current position of the respective moving body by use of the travel information when the GPS waves are not available.

Kyrtsos teaches a vehicle position determination system and method in which information from global positioning systems (GPS), pseudolites, and inertial reference units (IRU) is combined and enhanced in order to provide extremely accurate position estimates of terrestrial vehicles (cols. 4-5). Kyrtsos' inertial reference units obtain specific-force measurements from accelerometers and gyroscopes ("direction and speed") which when integrated into a navigation mathematical equation produces a vehicle's ("moving body") real time ("current") position and velocity (col.4 lines 3-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Kolls the inertial reference unit as disclosed in Kyrtsos and well known in the art in order to provide Kolls' service providing system and navigation system with the enhanced ability to provide a user with extremely accurate position information whether or not global positioning system information is available.

Regarding **claim 5**, Kolls discloses a service providing system (col.3 line 45 thru col.4 line 20), composed of an electronic appliance, a communication network, a communication terminal apparatus, and an authentication server, the electronic appliance (in-vehicle device) being one of an electronic appliance that mounted in a moving body and is equipped with a mobile communication terminal function and a mobile communication terminal apparatus (global appliance/internet appliance)with a fixed access path to the communication network and the authentication server being connected to said communication network, the service providing system comprising; access means that enables the communication terminal apparatus (global appliance/internet appliance) to access the electronic appliance via the communication network using a device ID store in a service server that has been assigned uniquely to the electronic appliance, the communication terminal apparatus accessing the electronic appliance only through the authentication server; terminal ID generating means , provided on said communication network, for generating a terminal ID for said communication terminal apparatus using information that identifies said fixed access path by which said communication terminal apparatus accesses said communication network; registration means for registering said unique device ID assigned to each electronic appliance and authentication process means provided in said authentication server, for using said terminal ID to perform an authentication process for said communication terminal apparatus that has accessed the authentication server and allowing said communication terminal apparatus to access said electronic appliance only when the communication terminal apparatus has been authenticated; and

transmission/reception means for receiving and transmitting service information, which has a predetermined content for realizing a specified service, between said communication terminal apparatus that has been authenticated by said authentication process means and said electronic appliance (uniquely identify and transfer information), in which the service server can access the electronic appliance only through the authentication server (col.3 line 45 thru col.4 line 20; col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23), and in which said each electronic appliance includes (i) a receiving device to receive global positioning satellite (GPS) radio waves (col.2 lines 59-64; col.34 lines 20-35; col.43 line 59 thru col.44 line 10; col.46 lines 11-19), and (ii) an autonomous navigation unit having to obtain travel information of the respective moving body without the use of the GPS radio waves (col.1 lines 19-21 “engine performance data”; col.3 lines 54-56 "vehicle telemetry and metric data can include global positioning system (GPS) data, vehicle operational data, engine performance data, and other vehicle data"; col.6 lines 45-59 "parking proximity sensor" and "further interconnection to a vehicle's control system, engine control system or other vehicle operational point"; col.7 lines 22-64; col.32 lines 11-25 "vehicle monitoring and metering means").

Kolls fails to specifically teach wherein the autonomous navigation unit includes a gyro and a speed sensor and in which the travel information is indicative of a speed of the respective moving body and a direction in which the respective moving body is moving, and (iii) a position measuring unit to receive the GPS radio waves and the travel information and to determine a current position of the respective moving body

such that the position measuring unit determines the current position of the respective moving body by use of the travel information when the GPS waves are not available.

Kyrtsos teaches a vehicle position determination system and method in which information from global positioning systems (GPS), pseudolites, and inertial reference units (IRU) is combined and enhanced in order to provide extremely accurate position estimates of terrestrial vehicles (cols. 4-5). Kyrtsos' inertial reference units obtain specific-force measurements from accelerometers and gyroscopes ("direction and speed") which when integrated into a navigation mathematical equation produces a vehicle's ("moving body") real time ("current") position and velocity (col.4 lines 3-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Kolls the inertial reference unit as disclosed in Kyrtsos and well known in the art in order to provide Kolls' service providing system and navigation system with the enhanced ability to provide a user with extremely accurate position information whether or not global positioning system information is available.

Regarding **claim 9**, Kolls discloses a communication apparatus (col.2 lines 5-65) for controlling communication between a plurality of electronic appliances, each electronic appliance being connected to a network, being provided with a unique device ID for identifying the electronic appliance, and being capable of transmission, the communication apparatus comprising communication means for communicating with another communication apparatus via said network; storage means for storing group information in which the plurality electronic appliances, which are permitted to

communicate between themselves after the communication is authenticated, are registered as a group; authentication process means for allowing a communication terminal apparatus (global appliance/internet appliance) to access the electronic appliance (in-vehicle device) only when the communication terminal apparatus (global appliance/internet appliance) has been authenticated; registration means for registering said unique device ID assigned to each electronic appliance; a service server operable to provide service information to one or more of the electronic appliances; and judgment means for judging, based on unique device IDs transmitted via the network before communication commences between said plurality electronic appliances and group information stored in said storage means, whether the communication is permitted; control means for having said communication means transmit a result judgment means to an exchange apparatus that is connected to said network and performs an exchange process for communication between electronic appliances based on the transmitted unique device IDs, in which the respective device and the service server can access the respective electronic appliance or appliances only through the authentication server (uniquely identify and transfer information) (col.3 line 45 thru col.4 line 20; col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23), and in which said each electronic appliance is mountable in a moving vehicle and includes (i) a receiving device to receive global positioning satellite (GPS) radio waves (col.2 lines 59-64; col.34 lines 20-35; col.43 line 59 thru col.44 line 10; col.46 lines 11-19), and (ii) an autonomous navigation unit having to obtain travel information of the respective moving body without the use of the GPS radio waves (col.1 lines 19-21 “engine performance data”; col.3 lines 54-56 "vehicle

telemetry and metric data can include global positioning system (GPS) data, vehicle operational data, engine performance data, and other vehicle data"; col.6 lines 45-59 "parking proximity sensor" and "further interconnection to a vehicle's control system, engine control system or other vehicle operational point"; col.7 lines 22-64; col.32 lines 11-25 "vehicle monitoring and metering means").

Kolls fails to specifically teach wherein the autonomous navigation unit includes a gyro and a speed sensor and in which the travel information is indicative of a speed of the respective moving body and a direction in which the respective moving body is moving, and (iii) a position measuring unit to receive the GPS radio waves and the travel information and to determine a current position of the respective moving body such that the position measuring unit determines the current position of the respective moving body by use of the travel information when the GPS waves are not available.

Kyrtsos teaches a vehicle position determination system and method in which information from global positioning systems (GPS), pseudolites, and inertial reference units (IRU) is combined and enhanced in order to provide extremely accurate position estimates of terrestrial vehicles (cols. 4-5). Kyrtsos' inertial reference units obtain specific-force measurements from accelerometers and gyroscopes ("direction and speed") which when integrated into a navigation mathematical equation produces a vehicle's ("moving body") real time ("current") position and velocity (col.4 lines 3-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Kolls the inertial reference unit as disclosed in Kyrtsos and well known in the art in order to provide Kolls' service providing system and

navigation system with the enhanced ability to provide a user with extremely accurate position information whether or not global positioning system information is available.

Regarding **claim 10**, Kolls discloses wherein a wireless communication is performed between said electronic appliances and the exchange apparatus (col.3 line 45 thru col.4 line 20).

Regarding **claim 11**, Kolls discloses wherein said electronic appliances are navigation apparatuses (col.3 line 45 thru col.4 line 20).

Regarding **claim 12**, Kolls discloses wherein one or more of said electronic appliances are mobile telephones (col.3 line 45 thru col.4 line 20).

Regarding **claim 13**, Kolls discloses wherein each of said electronic appliances is connected to said communication means in said exchange apparatus, and when communicating, each of said electronic appliances transmits said unique device ID to said communication apparatus, said exchange apparatus transmits a communication means ID for specifying said communication means to said communication apparatus, said communication apparatus authenticates said electronic appliance based on said group information, by referring combination of said transmitted unique device ID and said transmitted communication means ID (col.1 lines 40-48, col.5 lines 42-63).

Regarding **claim 14**, Kolls discloses wherein the group information is generated when an electronic appliance communicates with the communication apparatus via the network (col.3 line 45 thru col.4 line 20).

Regarding **claim 15**, Kolls discloses wherein the group information also includes content data that can used by the electronic appliances which are registered in the group information (col.3 line 45 thru col.4 line 20).

Regarding **claim 16**, Kolls discloses wherein the content data is geographical information (col.3 line 45 thru col.4 line 20).

Regarding **claim 17**, Kolls discloses a service providing system operable within the Internet, said system comprising a navigation unit mountable in a vehicle and operable to provide navigational and positional information of the vehicle to an operator of the vehicle, said navigation unit being assigned a unique identification ID (col.32 line 49 through col.33. line 34); a service server operable to provide a predetermined service and to store said unique ID for said navigation unit to which service can be provided (col.34 lines 36-62; col.35 lines 1-15); a communication network connectable to the Internet (col.34 lines 19-43); an authentication server operable to determine if access to the navigation unit is permissible (col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23); and a communication terminal apparatus connectable to the navigation unit and the communication network and operable to enable information to

be supplied to the navigation unit from the Internet by way of the communication network and to enable service information to be supplied to the navigation unit by use of said unique ID from the service server by way of the Internet and the communication network (col.34 lines 36-62; col.35 lines 1-15), in which the communication terminal apparatus and the service server can access the navigation unit only through the authentication server (col.3 line 45 thru col.4 line 20; col.14 lines 11-49; col.26 lines 65-67; col.55 lines 4-23), and in which the navigation unit includes (i) a receiving device to receive global positioning satellite (GPS) radio waves (col.2 lines 59-64; col.34 lines 20-35; col.43 line 59 thru col.44 line 10; col.46 lines 11-19), and (ii) an autonomous navigation unit having to obtain travel information of the respective moving body without the use of the GPS radio waves (col.1 lines 19-21 “engine performance data”; col.3 lines 54-56 "vehicle telemetry and metric data can include global positioning system (GPS) data, vehicle operational data, engine performance data, and other vehicle data"; col.6 lines 45-59 "parking proximity sensor" and "further interconnection to a vehicle's control system, engine control system or other vehicle operational point"; col.7 lines 22-64; col.32 lines 11-25 "vehicle monitoring and metering means").

Kolls fails to specifically teach wherein the autonomous navigation unit includes a gyro and a speed sensor and in which the travel information is indicative of a speed of the respective moving body and a direction in which the respective moving body is moving, and (iii) a position measuring unit to receive the GPS radio waves and the travel information and to determine a current position of the respective moving body

such that the position measuring unit determines the current position of the respective moving body by use of the travel information when the GPS waves are not available.

Kyrtsos teaches a vehicle position determination system and method in which information from global positioning systems (GPS), pseudolites, and inertial reference units (IRU) is combined and enhanced in order to provide extremely accurate position estimates of terrestrial vehicles (cols. 4-5). Kyrtsos' inertial reference units obtain specific-force measurements from accelerometers and gyroscopes ("direction and speed") which when integrated into a navigation mathematical equation produces a vehicle's ("moving body") real time ("current") position and velocity (col.4 lines 3-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Kolls the inertial reference unit as disclosed in Kyrtsos and well known in the art in order to provide Kolls' service providing system and navigation system with the enhanced ability to provide a user with extremely accurate position information whether or not global positioning system information is available.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner has included a list of references dating as far back as 1992 disclosing inertial reference/navigation systems and their use within global positioning systems in order to account for GPS signal outages and shortcomings. While these references have not been relied upon in the current action, they have been provided for Applicant's benefit to demonstrate the combination INS/GPS system that

one skilled in the art of GPS at the time of Applicant's application (as well as the Kolls application) would be exceedingly familiar with.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara Teslovich whose telephone number is (571) 272-4241. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tamara Teslovich/

Examiner, Art Unit 2437

/Emmanuel L. Moise/

Supervisory Patent Examiner, Art Unit 2437